DATA EVALUATION RECORD

1. CHEMICAL: Brodifacoum

2. FORMULATION: Technical (% A.I. unknown)

3. CITATION: Fourty day LC_{50}-Laughing Gull (1979). Test performed by Wildlife International for ICI Americas, Inc. Accession on Number 245704, Volume II ref. February 9, 1979.

4. Reviewed BY: Russel Farringer
   Wildlife Biologist
   EEB/HED

5. DATE REVIEWED: 7th October 1981

6. TEST TYPE: Dietary LC_{50} - Secondary hazard

   Test Species: Laughing Gull (Larus atricilla)

7. REPORTED RESULTS: The acute LC_{50} of Technical Brodifacoum in the Laughing Gull is estimated to be approximately 0.72 ppm.

8. REVIEWER'S CONCLUSIONS: This study will not support registration. The supplemental feed contained menadione sodium bisulfite complex which is prothrombogenic and could have baised the results.

Materials/Methods

Test Procedures

An attempt to determine the LC_{50} of Technical Brodifacoum in the Laughing Gull was made by Wildlife International LTD. for ICI Americas, Inc. Masticated Rodent tissue was spiked with Technical Brodifacoum. Mature gulls were then feed the respective dose level. The birds were obtained from Suncoast Seabird Sanctuary, Redington Shores, Florida. The birds were held two weeks prior to initiation of the study. Holding period basal diet was Southern States cat food. Fish scraps supplemented the diet. Photoperiod was 9 hours of light per day. Seperate pens for each dose level were used. Five dose levels were used (0.72, 1.62, 3.41, 7.26 and 14.02 ppm). Five birds per pen were randomly assigned irregardless of sex. The dose levels were analytically determined. A five day on spike food followed by a 5 week observation period on Southern State cat food. No mortality occurred in the control group, 60% mortality occurred at the 0.72 ppm level and 100% mortality at the rest of the dose levels. No mortality occurred the first 5 days of the study and no mortality occurred after the 18th day. The gulls at the 0.72 ppm consumed about half the quantity of food that the other gulls consumed. One gull at the 0.72 ppm level appeared to have died from an aspergillosis infection.

Statistical Analysis

None performed

Discussion/Results

Masticated rodent tissue spiked with Technical Brodifacoum was fed to Laughing gulls for a 5-day exposure period. The gulls were then maintained on Southern States catfood for on additional 5-week observation period. By Day 12 of the study, a 100% mortality rate had occurred in the 1.62 ppm, 3.41 ppm, 7.62 ppm and 14.02 ppm dose levels. A 60% mortality rate occurred in the 0.72 ppm dose level by Day 18. Necropsies performed on all mortalities revealed signs of hemorrhagic activity in all but one gull.

Reviewers Evaluation

A. Test Procedures

Generally follows EPA Guidelines.

B. Statistical Analysis

With only one partial mortality, none were performed.

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C. Discussion/Results

The results of this test could be biased by the use of basal feed containing Menadione sodium bisulfite complex. This complex is classified as a prothrombogenic hormone. Thus, the presence of the compound could mask the effect of an anticoagulent compound.

D. Conclusions

Category: Invalid
Rationale: See "C" above
Repairability: None